YEARS 1 EVERYDAY MATERIALS PLANNING

**Class:**

**Term:**

**Subject:** Science

**Unit:** Materials

<table>
<thead>
<tr>
<th>Differentiation and support (Detailed differentiation in weekly plans.)</th>
<th>English: new vocabulary, explaining their work and their ideas, describing images and layout for non-fiction (science investigation format)</th>
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</thead>
<tbody>
<tr>
<td>SEN: Support from more able peers. Additional adult support. Give worksheets, rather than needing to work in books</td>
<td>Maths: sorting activities, comparing materials and amounts</td>
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<td>GT: Support less able peers. Less adult support. Expect them to work in books, rather than on worksheets. Encourage to get on to extension activities. Encourage use of scientific vocabulary</td>
<td>ICT: learning from online activities</td>
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<td>Art &amp; DT: why we use different materials for different things</td>
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**Teddy’s Houses**

The investigation lessons (lesson 3 to 7) are based around helping a teddy bear to find out which materials are most suitable for different jobs (a roof, curtains, a table-top and a towel). These lessons can be adapted slightly to not require the Teddy’s houses; however Teddy’s requests give the children a reason for carrying out the investigations and help them to link their findings to how we choose materials for real-life objects.

Each Teddy’s house requires a small box e.g. a shoe box, with two windows (small holes for use to test the transparency of different materials) cut in it and no top / lid. Children then add something to their house at the end of each lesson, based on what they found out in the investigation e.g. they add curtains made from an opaque material.

Children can then take their Teddy’s house home at the end of the unit and continue to add things to it if they wish to.
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<th>Learning objective</th>
<th>Teaching activities</th>
<th>Resources</th>
<th>Assessment: Success Criteria</th>
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<td>1</td>
<td>To distinguish between an object and the material from which it is made</td>
<td>Intro: Explain that objects are made from materials, giving a couple of examples, including some objects that are made from more than one material. Ask children to think, pair, share the names of as many materials as they can. Show children PowerPoint slide with examples of objects that are made from wood, metal, glass, fabric, paper, rock and plastic. Go through each of these examples to explain the difference between an object and the material that it is made from. Ask children if they can think of any objects that can be made from different materials e.g., a bottle can be made from glass or plastic. Explain and model independent work.</td>
<td>Objects on children’s desks.</td>
<td>MUST: understand the difference between an object and the material/s that it is made from.</td>
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<td></td>
<td>To know the names of a range of materials</td>
<td>Main: Have a range of objects that are made of a range of materials on the children’s desks. Try to have objects that are:  - made from wood, metal, glass, fabric, paper, rock and plastic. - each made purely from one material e.g., a pencil might be made from lead, wood, and metal, so a wooden stick might be preferable. Children to draw objects on their desks and write their names and the materials that they are made from. More able children to work in books if can understand the task without using a worksheet.</td>
<td>Worksheets (copies for in class and for around school).</td>
<td>SHOULD: demonstrate this understanding by drawing objects, naming them and the materials that they are made from.</td>
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<td>(30 mins in class)</td>
<td>Plenary: Children to show their work to a partner and see if they agreed about the material that each of the objects was made of, discussing any differences.</td>
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<td>COULD: do the above for a greater number of objects.</td>
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<td>(30 mins walking around school)</td>
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To be able to describe the properties of a range of materials (30 mins in class) (30 mins walking around school)

**Intro:**
- Go through PowerPoint with the following slides:
  - asking children to think of words to describe materials
  - some examples of basic describing words for materials and an explanation of how these words describe the properties of materials
  - explain what each of the following properties means, with visual examples of materials / objects that have each property: hard, soft, bendy, stretchy, stiff, shiny, dull, rough, smooth
  - revise the phrase ‘properties of materials’
  - final slide with examples of objects with each of the properties to leave up during lesson for children to refer to

**Explain independent work:**
- Warn children that when they are testing how bendy objects are, they should not try to break them, just try to bend them a little

**Main:**
- Have a range of objects on the children’s desks that have the range of properties covered in the intro
- Children to draw the objects in 4 tables with headings of hard / soft, bendy or stretchy / stiff, shiny / dull and rough / smooth
- Emphasise that children should draw the objects small so that they can fit a few in each box, and leave space to write their names if they do this
- Tell children that if they are not sure what the words at the top of the column say, they can look at the slide on the board and / or sound out the first two letters, then they should be able to guess the word (if doing these things doesn’t help, they can ask a friend)
- Explain that they do not need to draw all of the objects in all of the tables e.g. they might only draw the ruler in the box for bendy objects
- **Extension:** Children to think of some of their own objects to add and / or write the names of the objects

**Plenary:**
- Children to compare their work with a partner and see if they put all of the objects in the same place in the tables, discussing any differences
- Take children for a walk around the school to find things that have different properties

**Worksheets**
- Must: know some of the properties that materials can have
- Should: classify objects based on their properties
- Could: think of some of their own examples of objects with each property

**Classroom objects:**
- Glass, plastic ruler, new shiny coins, old dull coins, paper clips, elastic bands, pens, brushes / combs, CDs / DVDs, sandpaper, crisps / crackers, black paper, white paper, tin foil, feather, empty balloons, bubble wrap, cardboard etc
| **To be able to identify materials and their properties** | **Intro:**
Ask children to think, pair, share the names of as many different materials as they can
Ask children to think, pair, share the names of as many different properties of materials as they can
Explain / revise what ‘float’ and ‘sink’ mean
Explain the difference between things that are natural and things that are made by people e.g. rain and grass are natural, whereas fizzy drinks and mobile phones are made by people
Explain that we will be playing some games on the computers on materials, and the children will need to use what they have learnt about materials to be successful
Show children the games from the BBC website at [http://www.bbc.co.uk/bitesize/ks1/science/properties_of_materials/play/](http://www.bbc.co.uk/bitesize/ks1/science/properties_of_materials/play/), which cover properties of materials, what materials objects are made from and choosing the best object for a job e.g. logs to make a raft
Show children the extension activity, and how to use it, at [http://www.bbc.co.uk/schools/scienceclips/ages/5_6/sorting_using_mate.shtml](http://www.bbc.co.uk/schools/scienceclips/ages/5_6/sorting_using_mate.shtml) where children need to test different materials to see if they are bendy and if they are waterproof |
| **To understand how an object’s properties make it suitable for particular things** | **Main:**
Children to play the games at [http://www.bbc.co.uk/bitesize/ks1/science/properties_of_materials/play/](http://www.bbc.co.uk/bitesize/ks1/science/properties_of_materials/play/) and draw the objects that are the correct answers on their worksheet
Emphasise that the children:
- must complete the worksheet as they play the game
- only draw the objects that they collect, not just draw all 3 of them
- need to make each drawing small, so that both objects will fit in the box on the worksheet
(Prioritise earphones for children who struggle most with reading, if earphones are available and there is a limited number of them)
Extension: Complete the second activity on testing materials to see if they are bendy and if they are waterproof |
| **To understand the difference between natural and man-made** | **Plenary:**
Children to share their work with a partner and compare their answers, discussing any differences (encourage them to use the key vocabulary of materials used during the lesson / in the games when doing this)
Complete the quiz from [http://www.bbc.co.uk/schools/scienceclips/ages/5_6/sorting_using_mate.shtml](http://www.bbc.co.uk/schools/scienceclips/ages/5_6/sorting_using_mate.shtml) asking children to vote for the correct answer each time and choosing some children to try to explain their choice |

**PCs / Laptops**

- MUST: identify objects that have given properties and that are made of given materials

**Worksheets**

- SHOULD: select an object for a specific job based on its properties

- COULD: use a simulation to test if different materials are bendy and / or waterproof
To access the complete version of this *Year 1 Every Day Materials planning*, and all of the resources to go with it, visit